



Kaltech Energy[®]
SOLAR ENERGY SOLUTIONS

2024

PRODUCT CATALOGUE

**SOLAR WATER
HEATER SYSTEMS**



kaltechenergy.com



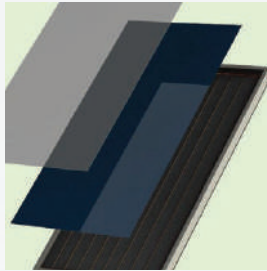


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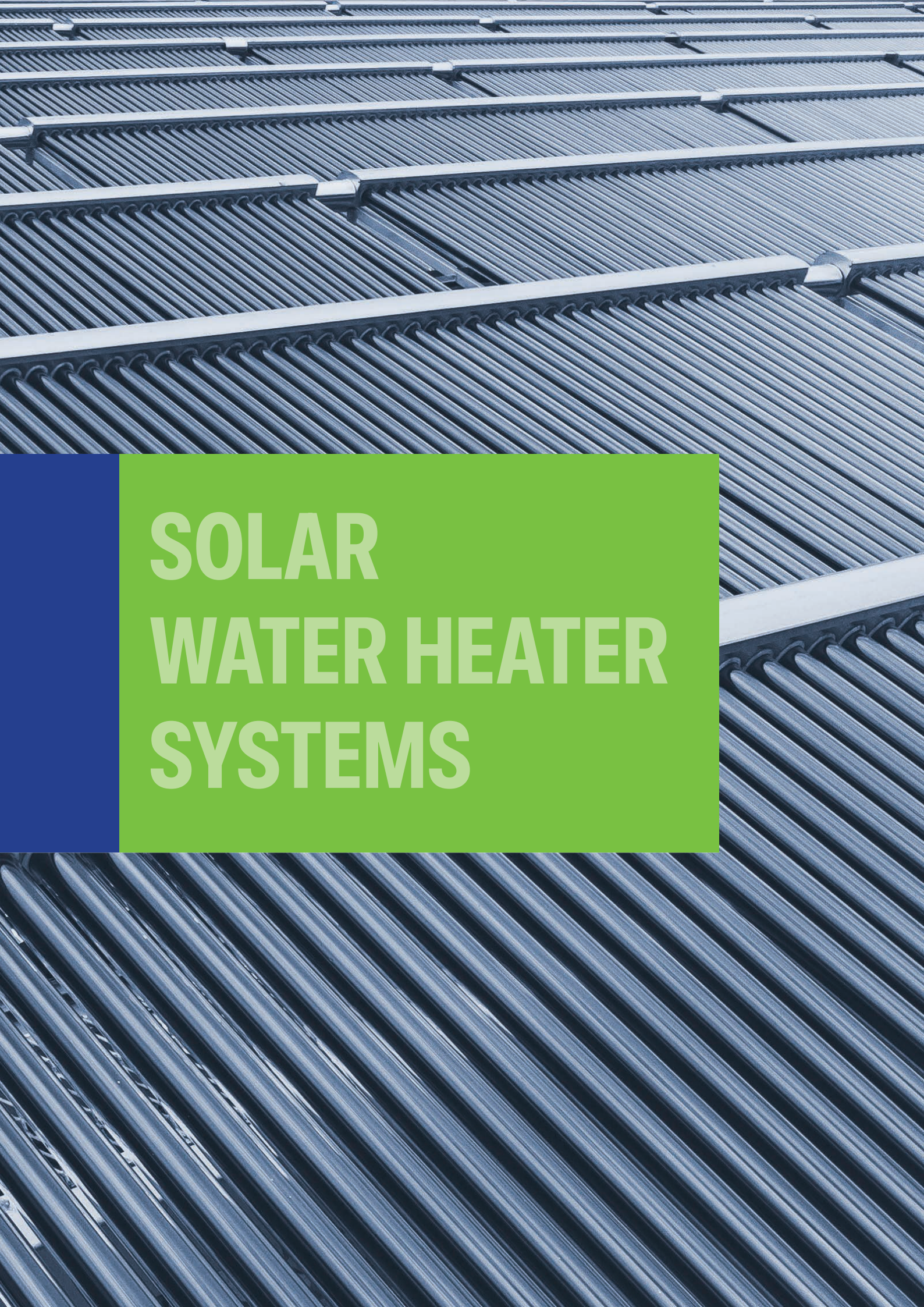
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Backup Heating Element | Thermostat | Solar Station | Solar Controller
Pressure Relief Valve | Pressure and Temperature Valve | Thermo Mixing Valve
Expansion Tank | Magnesium Anode | Air Vent Circulation Pump | Flow Meter
Compression Fittings | Emergency Cooler | Solar Thermal Medium

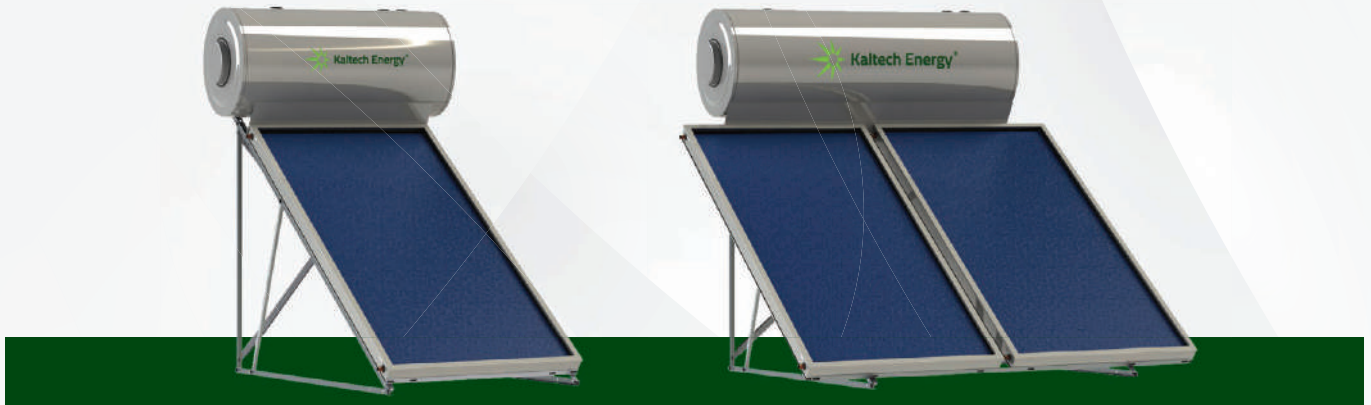
A close-up, high-angle photograph of a solar water heater array. The image shows multiple rows of parallel, dark-colored tubes, likely copper or aluminum, which are part of the heat exchanger. The tubes are arranged in a grid pattern, with metal brackets or supports visible between the rows. The lighting creates a strong sense of depth and texture, highlighting the metallic surfaces and the repetitive pattern of the tubes.

SOLAR WATER HEATER SYSTEMS

Thermosyphon Systems

Standard Height Models

Thermosyphon solar water heater with flat plate collectors harnesses natural convection to provide efficient, low-maintenance water heating. The flat plate collector absorbs sunlight, heating water that circulates naturally between the collector and an elevated storage tank. This system offers reliable hot water with no need for pumps or controllers



TECHNICAL DATA			
Model	KETSS0150G	KETSS0200G	KETSS0300G
Capacity (L)	150	200	300
No. of Collectors	1	1	2
Collector Area (m ²)	2.12	2.12	4.24
Collector Dimensions (cm)	104 x 204	104 x 204	104 x 204
Tank Dimensions (cm)	58 (Dia) x 105 (L)	58 (Dia) x 125 (L)	58 (Dia) x 170 (L)
Internal Protection	Thick enamel 250-350 µm		
Anti Corrosion Protection	Magnesium rod 22mm Dia x 400mm L		
Insulation	Polyurethane		
Insulation Thickness	50 mm		
Insulation Density	42kg/m ³		
Internal Tank Material	S300EK AM FCE – 2,5 mm		
Outer Casing Material	GRANITE® HDX – 0,5 mm, Powder Coated, UV Resistant		

HIGH EFFICIENT FLAT
PLATE COLLECTOR

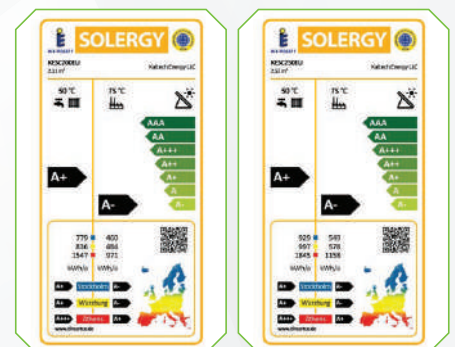
BACKUP ELECTRIC
HEATING ELEMENT

RELIABLE HOT WATER
CIRCULATION

SIMPLE AND LOW
MAINTENANCE DESIGN

- Solar Keymark
- Dubai Central Laboratory (DCL)
- Solergy
- Low voltage directive 2014/35/EU
- Electromagnetic compatibility directive 2014/30/EU
- Pressure equipment directive 2014/68/EU
- ROHS directive 2011/65/EU
- Energy labelling regulation 812/2013/EU
- Ecodesign regulation 814/2013/EU
- Bahrain Ministry Of Works

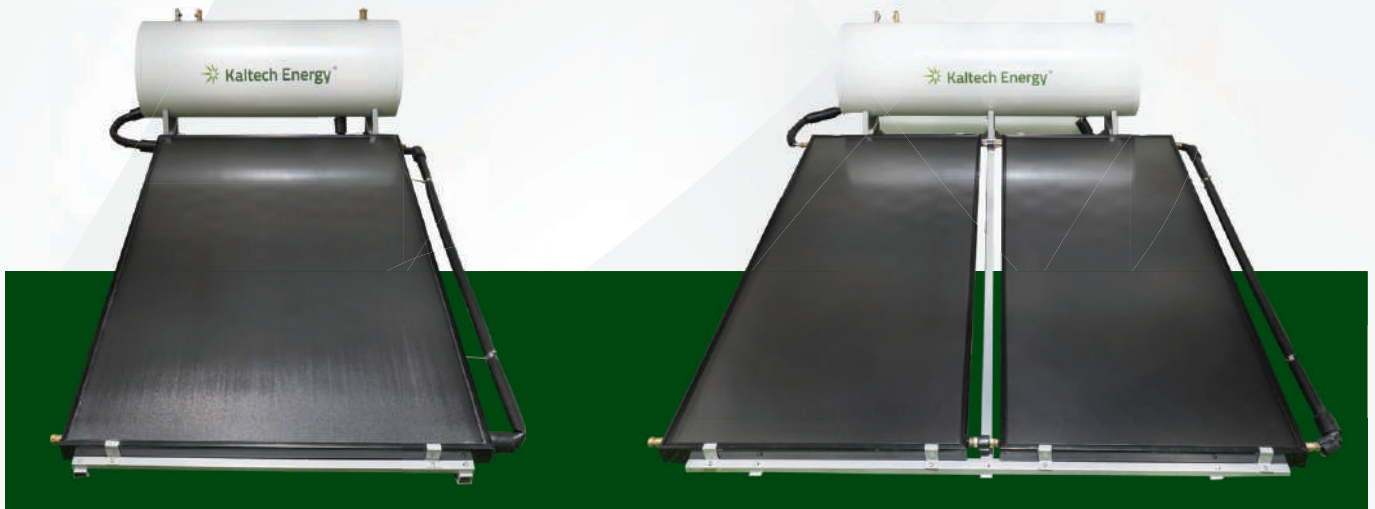
MADE IN EU



Thermosyphon Systems

Standard Height Models

Pressurized Flat Plate Solar Water Heater with Enamel-Coated Tanks. This economical model offers high performance without compromising on quality. Designed for easy installation and reliable operation, the pressurized flat plate system ensures efficient solar water heating. The enamel-coated tank provides superior durability and corrosion resistance, making it an ideal choice for long-term residential use.



TECHNICAL DATA			
Model	KETSS0150C	KETSS0200C	KETSS0300C
Capacity (L)	150	200	300
No. of Collectors	1	1	2
Collector Area (m ²)	2	2	4
Collector Dimensions (cm)	100 x 200	100 x 200	100 x 200
Tank Dimensions (cm)	56 (Dia) x 114 (L)	56 (Dia) x 147 (L)	60 (Dia) x 178 (L)
Internal Protection	Thick enamel 250-350 µm		
Anti Corrosion Protection	Magnesium rod 22mm Dia x 400mm L		
Insulation	Polyurethane		
Insulation Thickness	50 mm		
Insulation Density	42kg/m ³		
Internal Tank Material	Enamel Lined Steel		
Outer Casing Material	Powder Coated, UV Resistant Steel		

HIGH EFFICIENT FLAT PLATE COLLECTOR

BACKUP ELECTRIC HEATING ELEMENT

RELIABLE HOT WATER CIRCULATION

SIMPLE AND LOW MAINTENANCE DESIGN

Certifications

- Solar Keymark
- Durability and Reliability Tested by Intertek
- Performance Tested by Intertek
- DCL Approval – under process

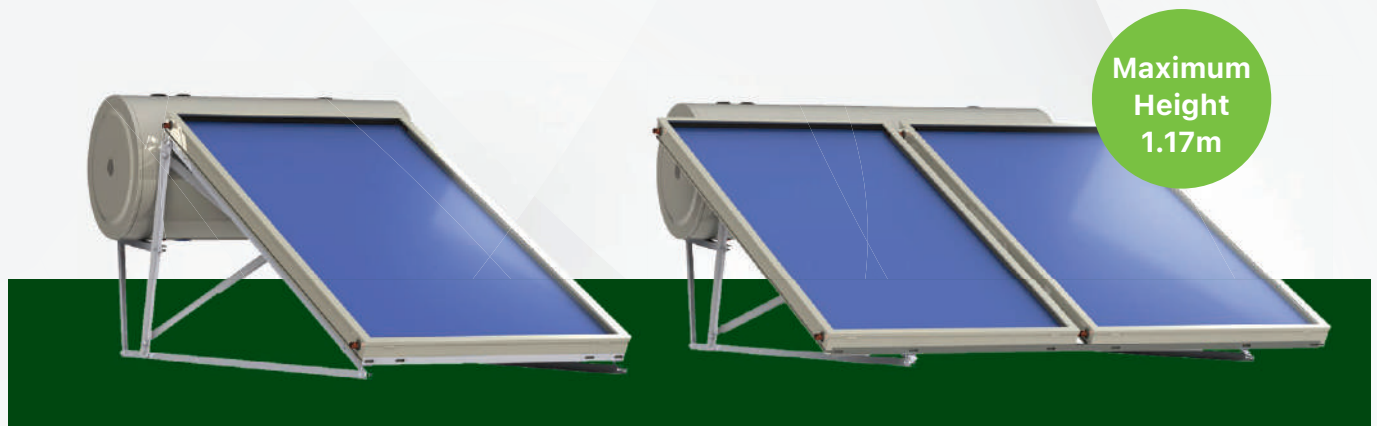


MADE IN CHINA

Thermosyphon Systems

Low Height Models

Thermosyphon solar water heater systems with flat plate collector and low-profile storage tank designed for enhanced aesthetics. Perfect for residential use, this system delivers reliable hot water with no need for pumps or controllers.



TECHNICAL DATA			
Model	KETSL0150G	KETSL0200G	KETSL0300G
Capacity (L)	150	200	300
No. of Collectors	1	1	2
Collector Area (m ²)	2.12	2.12	4.24
Collector Dimensions (cm)	104 x 204	104 x 204	104 x 204
Tank Dimensions (cm)	58 (Dia) x 105 (L)	58 (Dia) x 125 (L)	58 (Dia) x 170 (L)
Internal Protection	Thick enamel 250-350 µm		
Anti Corrosion Protection	Magnesium rod 22mm Dia x 400mm L		
Insulation	Polyurethane		
Insulation Thickness	50 mm		
Insulation Density	42kg/m ³		
Internal Tank Material	S300EK AM FCE – 2,5 mm		
Outer Casing Material	GRANITE® HDX – 0,5 mm, Powder Coated, UV Resistant		

HIGH EFFICIENT FLAT
PLATE COLLECTOR

BACKUP ELECTRIC
HEATING ELEMENT

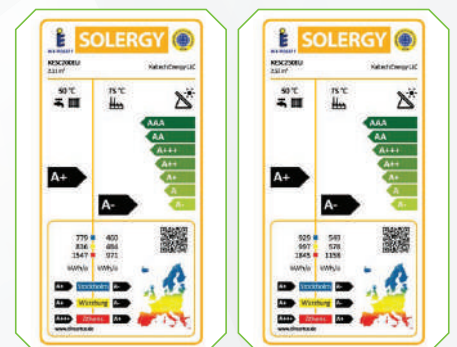
RELIABLE HOT WATER
CIRCULATION

SIMPLE AND LOW
MAINTENANCE DESIGN

Certifications

- Solar Keymark
- Dubai Central Laboratory (DCL)
- Solergy
- Low voltage directive 2014/35/EU
- Electromagnetic compatibility directive 2014/30/EU
- Pressure equipment directive 2014/68/EU
- ROHS directive 2011/65/EU
- Energy labelling regulation 812/2013/EU
- Ecodesign regulation 814/2013/EU

MADE IN EU

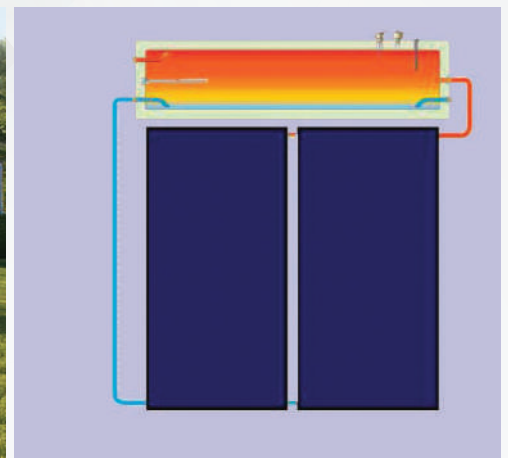


Thermosyphon Systems

Premium Series - Direct Systems

Efficient solution designed for reliable water heating. Utilizing natural convection, this direct system heats water directly in the solar collector and stores it in a durable, corrosion-resistant stainless-steel tank, ensuring high performance and longevity.

- Highly resistant to corrosion, ensuring longevity and clean water storage
- Stainless Steel Tank
- No pumps or controls required; water circulates based on temperature differences.
- Water is heated directly in the collector and stored for use, making it efficient for warm climates



TECHNICAL DATA			
Model	KETSD0150C	KETSD0150C	KETSD0150C
Capacity (L)	150	200	300
No. of Collectors	1	1	2
Collector Area (m ²)	2	2	4
Collector Dimensions (cm)	100 x 200	100 x 200	100 x 200
Tank Dimensions (cm)	54 (Dia) x 116 (L)	54(Dia) x 149 (L)	54(Dia) x 215 (L)
Anti Corrosion Protection	Magnesium rod 22mm Dia x 400mm L		
Insulation	High Density Polyurethane		
Insulation Thickness	50 mm		
Insulation Density	42kg/m ³		
Internal Tank Material	SUS 316, 1.5 mm		
Outer Casing Material	SUS 304 ,0.5 mm		

HIGH EFFICIENT FLAT PLATE COLLECTOR

BACKUP ELECTRIC HEATING ELEMENT

RELIABLE HOT WATER CIRCULATION

SIMPLE AND LOW MAINTENANCE DESIGN

Certifications

- Solar Keymark
- Durability and Reliability Tested by Intertek
- Performance Tested by Intertek
- Dubai Municipality Approved

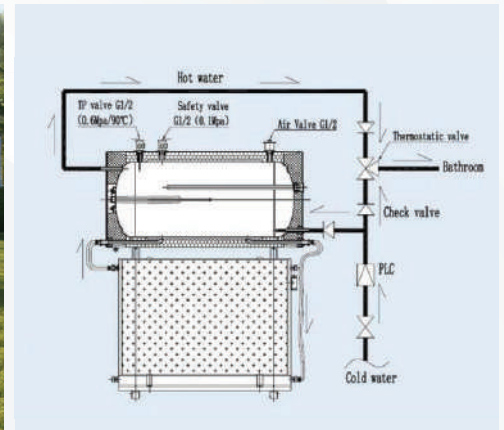


Thermosyphon Systems

Premium Series - Indirect Systems

Thermosyphon Solar Water Heater with an Indirect System is designed for reliable water heating in areas with hard water or colder climate. In this system, heat-transfer fluid circulates through the solar collector, and heat is transferred indirectly to the water stored in a robust, Stainless Steel Jacketed Tanks. This ensures excellent performance while preventing scaling and freezing

- Stainless Steel Jacketed Tanks SS316
- Highly corrosion resistant, ensuring long-lasting durability and hygienic water storage
- Operates without pumps, using natural convection for fluid circulation.



TECHNICAL DATA			
Model	KETSIO150C	KETSIO200C	KETSIO300C
Capacity (L)	150	200	300
No. of Collectors	1	1	2
Collector Area (m ²)	2	2	4
Collector Dimensions (cm)	100 x 200	100 x 200	100 x 200
Tank Dimensions (cm)	54 (Dia) x 116 (L)	54(Dia) x 149 (L)	54(Dia) x 215 (L)
Anti Corrosion Protection	Magnesium rod 22mm Dia x 400mm L		
Insulation	High Density Polyurethane		
Insulation Thickness	50 mm		
Insulation Density	42kg/m ³		
Internal Tank Material	SUS 316, 1.5 mm		
Outer Casing Material	SUS 304 ,0.5 mm		

HIGH EFFICIENT FLAT PLATE COLLECTOR

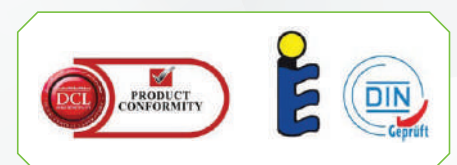
BACKUP ELECTRIC HEATING ELEMENT

RELIABLE HOT WATER CIRCULATION

SIMPLE AND LOW MAINTENANCE DESIGN

Certifications

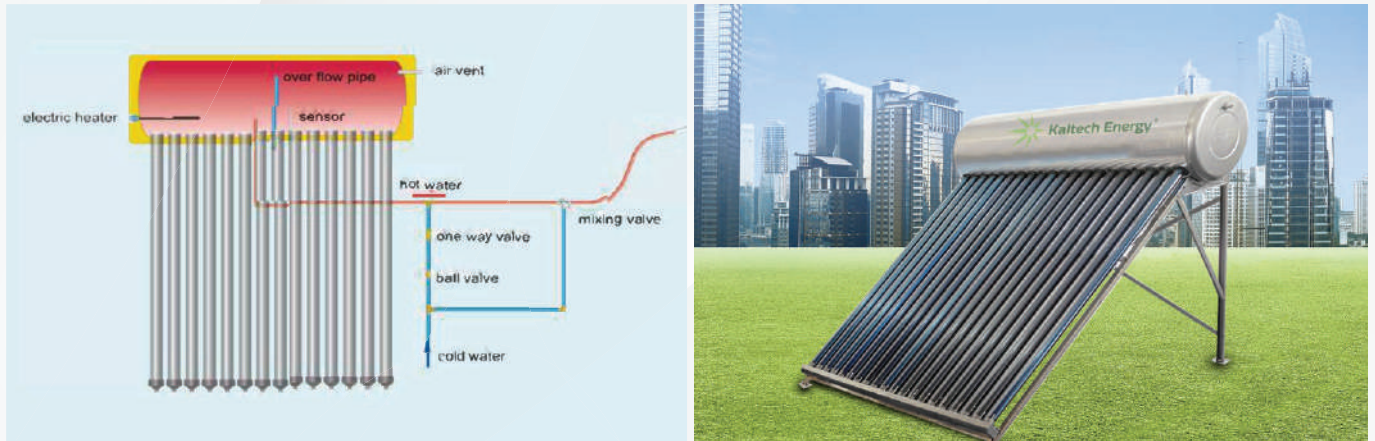
- Solar Keymark
- Durability and Reliability Tested by Intertek
- Performance Tested by Intertek
- Dubai Municipality Approved



Thermosyphon Systems

Low Pressure Series

A low-pressure evacuated tube solar water heater uses vacuum-sealed glass tubes to capture sunlight and heat water efficiently. It operates without pumps, making it affordable and easy to install. Ideal for households, it provides hot water for daily use at lower water pressure.



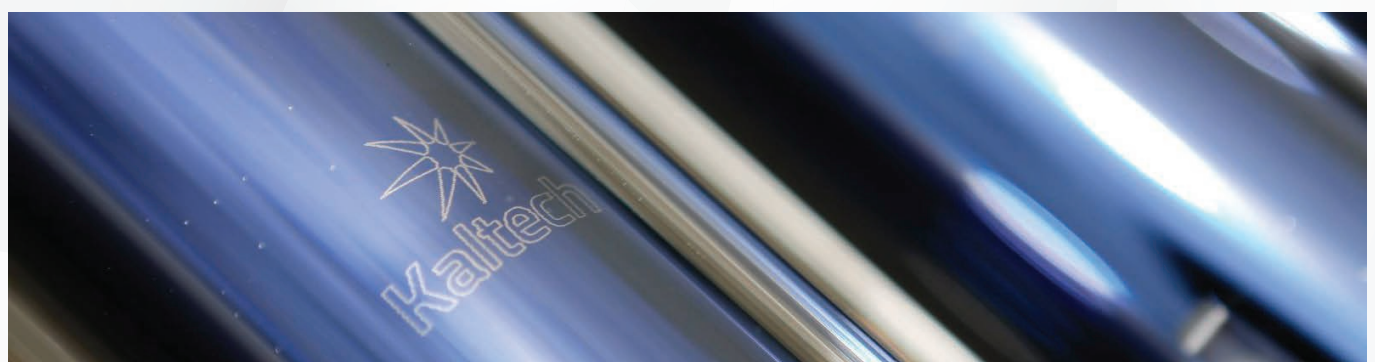
TECHNICAL DATA			
Model	KEETL0150C	KEETL0200C	KEETL0300C
Capacity (L)	150	200	300
Solar Vacuum Tube Dimensions (mm)	58 (Ø) x 2100 (L)	58 (Ø) x 2100 (L)	58 (Ø) x 2100 (L)
No. of Tubes	15	20	30
Light Area (m ²)	2.4	3.2	4.8
Vacuum Tube Type	ALN/ALN-SS/CU		
Tank Dimensions (cm)	3 60 Ø x 1472 L	3 60 Ø x 1962 L	3 60 Ø x 2940 L
Anti Corrosion Protection	Magnesium rod 22mm Dia x 400mm L		
Insulation	High Density Polyurethane		
Insulation Thickness	50 mm		
Insulation Density	42kg/m ³		
Internal Tank Material	SUS 304, 0.5 mm		
Outer Casing Material	SUS 304, 0.5 mm		

STAINLESS STORAGE TANK

BACKUP ELECTRIC HEATING ELEMENT

RELIABLE HOT WATER CIRCULATION

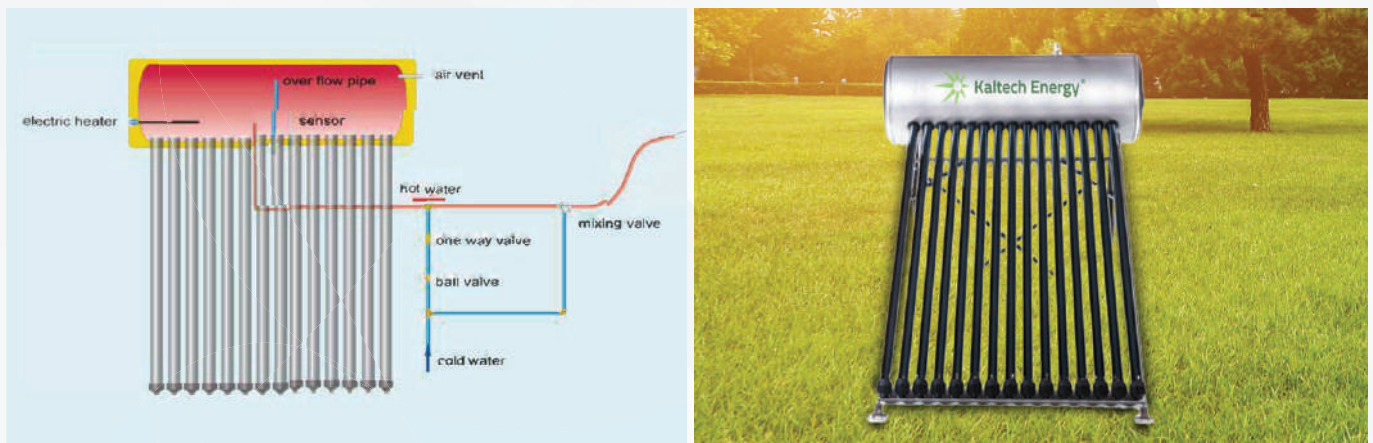
SIMPLE AND LOW MAINTENANCE DESIGN



Thermosyphon Systems

High Pressure Series

The Evacuated Tube High-Pressure Solar Water Heater is an advanced and efficient system designed to harness solar energy for dependable water heating. This direct system heats water through heat pipes within the tubes, ensuring optimal efficiency and rapid heating. Engineered for durability, its high-pressure design guarantees a steady supply of hot water, making it ideal for use in modern plumbing systems that operate under higher pressures.



TECHNICAL DATA			
Model	KEETP0150C	KEETP0200C	KEETP0300C
Capacity (L)	150	200	300
Solar Vacuum Tube Dimensions (mm)	58 (Ø) x 2100 (L)	58 (Ø) x 2100 (L)	58 (Ø) x 2100 (L)
No. of Tubes	15	20	30
Light Area (m ²)	2.4	3.2	4.8
Vacuum Tube Type	High efficient ALN/ALN-SS/CU		
Tank Dimensions (cm)	3 60 Ø x 1472 L	3 60 Ø x 1962 L	3 60 Ø x 2940 L
Anti Corrosion Protection	Magnesium rod 22mm Dia x 400mm L		
Insulation	High Density Polyurethane		
Insulation Thickness	50 mm		
Insulation Density	42kg/m ³		
Internal Tank Material	SUS304-2B food-grade stainless steel - 1.2 mm thickness		
Outer Casing Material	SUS304-2B food-grade stainless steel - 0.4mm thickness		

STAINLESS STORAGE TANK

BACKUP ELECTRIC HEATING ELEMENT

RELIABLE HOT WATER CIRCULATION

SIMPLE AND LOW MAINTENANCE DESIGN

Certifications



Forced Circulation Systems

Flood Type Systems

A flood-type solar water heating system heats water by circulating a thermal medium continuously. This system includes solar collectors, a storage tank, a circulation pump, and control mechanisms. Flood systems can be classified as either direct or indirect. In direct systems, the water being heated serves as the thermal medium, while in indirect systems, a glycol solution or a glycol-water mix is used as the thermal medium.

- Energy Efficient
- Cost-Effective
- Environmentally Friendly
- Low Maintenance

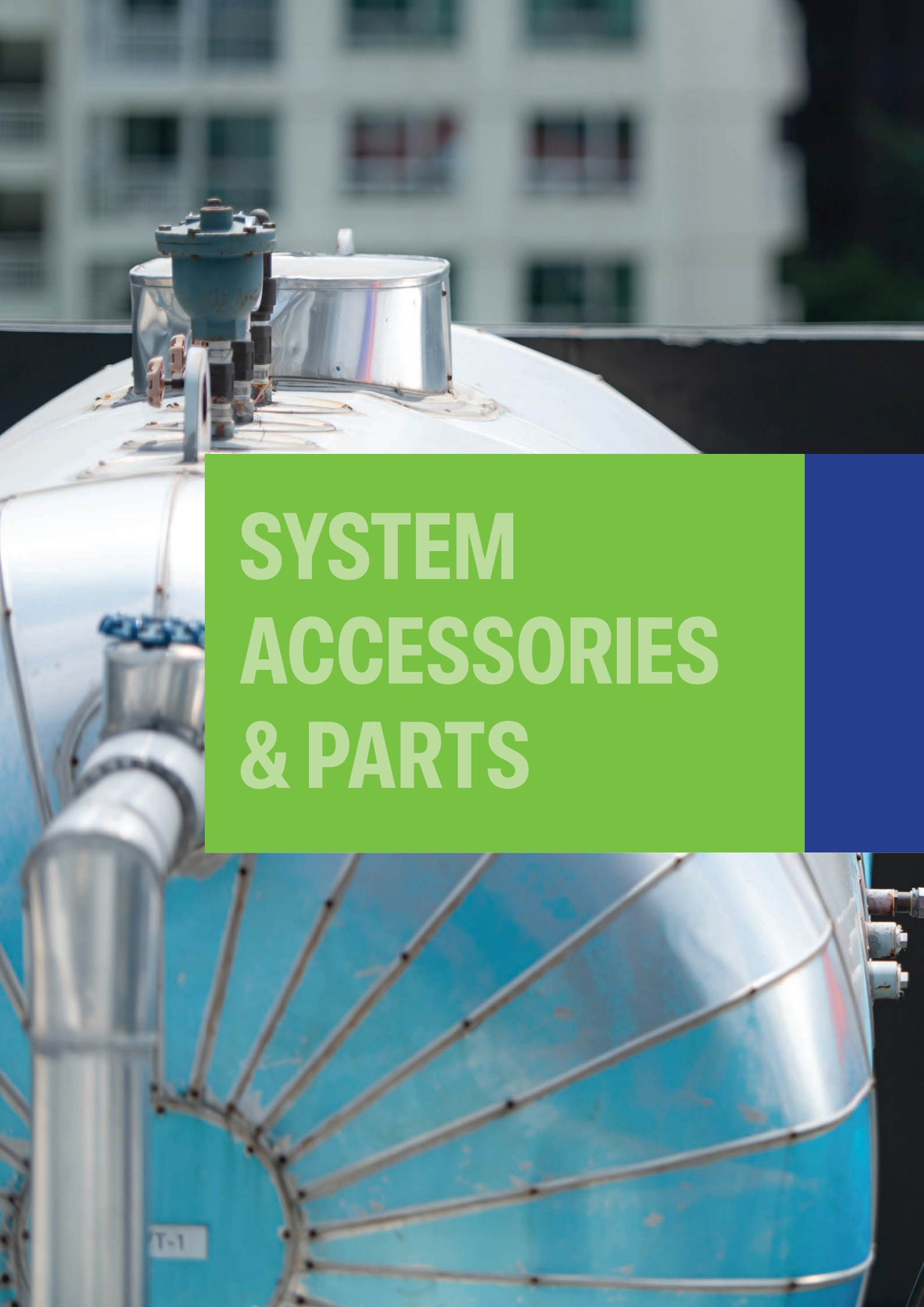


Drain Back Systems

A drain-back solar water heater is an active solar thermal system designed to heat water for residential or commercial use. When solar energy is available, a pump circulates the heat transfer fluid through solar collectors, where it absorbs heat from the sun. The heated fluid then travels to a heat exchanger, transferring its energy to the water stored in a tank. Once the desired temperature is reached, the pump stops, and the thermal fluid drains back into the storage tank, preventing overheating and protecting the system when it is not in use.

- Highly efficient
- Accurate temperature control
- Overheat Protection
- Longer life





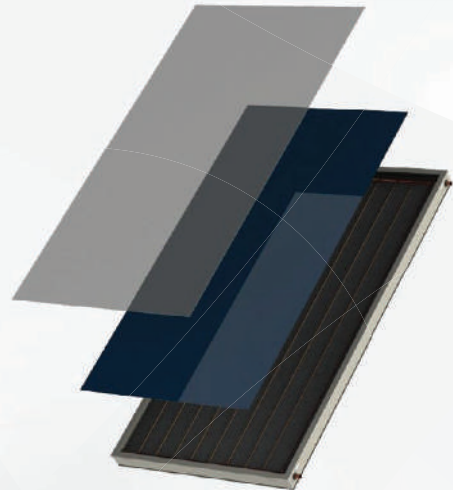
**SYSTEM
ACCESSORIES
& PARTS**

T-1

Solar Collectors

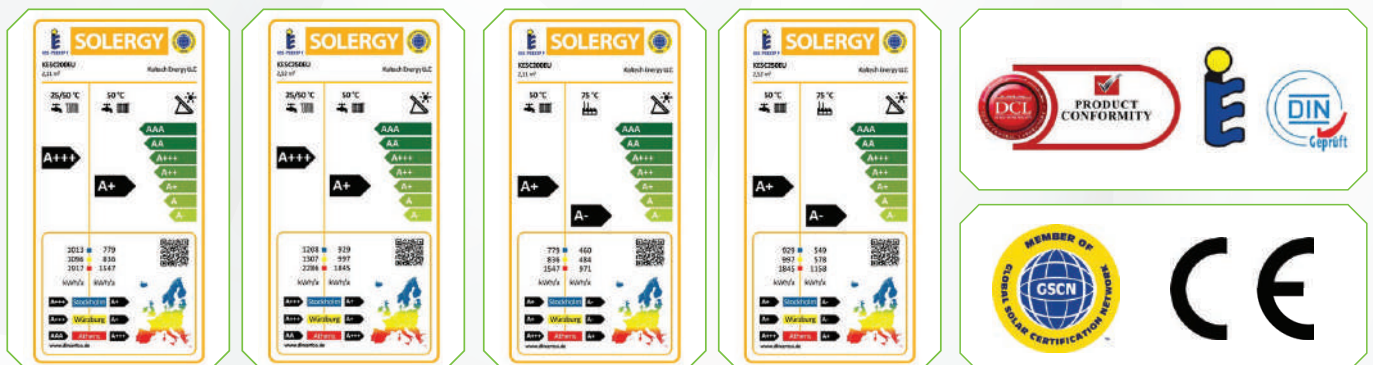
Flat Plate Collector

Harp type collector with copper hydro skeleton, high performance single surface aluminium absorber and laser welding technology. Aluminium profile frame with electrostatic painting and unbreakable safety glass. Tested for performance and reliability by Institut fur Solartechnik SPF, Switzerland.



Model		KESC200EU	KESC250EU
Dimensions	mm	1040X2040X89	1240X2040X89
Gross area	m ²	2.12	2.52
Aperture area	m ²	1.92	2.30
Absorber area	m ²	1.91	2.28
weight	kg	42	45
Frame	Extruded aluminum 1,3mm thickness – painted		
Back plate	Al 0,4mm thickness		
Absorber	Al high selective ALANOD Mirotherm – 0,4mm thickness		
Absorption	%	95	
Emission	%	5	
Manifolds	Ø mm	22	
Risers	Ø mm – Nr	Ø8 – 9pcs	Ø8 – 11pcs
Connections	Blank (compression joint)		
Transparent cover	3,2mm solar glass 91,8% transmittance		
Insulation	Mineral wool 40mm thickness – 40 kg/m ³ density		

Certifications



Solar Collectors

Vacuum Tube Solar Collector – Low Pressure



- Inner Manifold : SUS304-2B food-grade stainless steel - 0.5mm thickness , laser welding technology .
- Vacuum Tube : High efficient ALN/ALN-SS/CU coating ,58 x 2100 mm vacuum tube - 1.6mm thickness, resist 25mm hail .
- Outer Manifold : SUS304-2B food-grade stainless steel - 0.4mm thickness , free-welding technology .
- Insulation Layer : High density polyurethane - 50mm thickness , 72 hours efficient thermal insulation .
- Frame support : SUS 201BA stainless steel - 1.2mm thickness thickness, anti-corrosive and anti-ultraviolet .
- M8 Stainless steel SUS 304 bolts and nuts .
- 58mm Silicone seal ring and dust ring

Solar Collectors

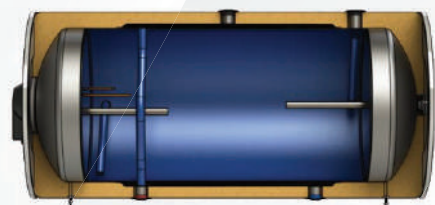
Vacuum Tube Solar Collector – Pressurized



- Inner manifold: Copper header pipe , Potable water rated. Maximum pressure: 1000kPa, Size 45mm x 1mm thickness
- Outer manifold: Aluminium alloy with Anodized or Powder Coated Finish , thickness 2mm
- 80mm distance between vacuum tubes
- Insulation: High quality Glass Wool (K = 0.043W/mK), 50mm
- Vacuum tube: Borosilicate 3.3 twin wall glass 58 x 2100 mm, AlN/AlN-SS/CU coating, Vacuum: $P < 5 \times 10^{-3}$ Pa, 58 mm x 2100 mm
- Heat pipe: High purity "oxygen free" copper pipe with Aluminium fin ,Startup temperature -45 C ;24mm diameter*55mm length condenser , 1mm thickness; 8mm diameter*1950 mm length Body,0.6 mm thickness
- Frame: 6005-T5 Aluminium Alloy 2.5mm thickness
- Stainless steel SUS 304 bolts
- Rubber Components :HTV Silicone Rubber (UV stabilised)

Glass Lined Jacketed Tank

for Thermosyphon Systems



Durable, corrosion-resistant tanks designed for Solar thermosyphon solar water heaters. The glass lining ensures longevity, while the jacket optimizes heat transfer for maintenance-free operation. Equipped with safety valves and provisions for a backup heating element, these tanks feature corrosion protection with a magnesium anode for enhanced durability and efficiency

- Closed circuit with mantle type exchanger
- Internal protection - Enamel thickness 250-350µm
- Antioxidant protection - Magnesium Rod Ø22x400mm
- Insulation - Molded polyurethane, 50 mm , 42kg/m³
- Inner Tank Material S300EK AM FCE – 2.5mm
- Jacket Material - S235JR – 1.5mm
- Outer Casing Material - GRANITE® HDX – 0.5mm, Powder Coated
- Available Sizes – 150 L , 200 L and 300 L

Stainless Steel Jacketed Tank

For Premium Thermosyphon Systems



Built to endure diverse water conditions, these tanks offer exceptional corrosion resistance and long-lasting performance. Their sleek design ensures a maintenance-free operation for years of reliable service.

- Closed circuit with mantle type exchanger
- Inner Tank Material - Stainless Steel SUS 316, 1.5 mm
- Jacket Material – Stainless Steel ,SUS 304, 1.2 mm
- Insulation - High density Polyurethane 50 mm
- Outer Tank Material – Stainless Steel , SUS 304, 0.5 mm
- Antioxidation – magnesium anode
- Equipped with PT Valve, Safety Valve, Pressure Relief Valve

Glass Lined Hot Water Storage Tank

For Commercial Solar Water Heaters



Designed for large-scale solar water heating, Glass lined storage tanks offer efficient heat retention and reliable performance. Ideal for commercial applications, they ensure dependable operation even in demanding environments.

- Glass-lined inner tank
- Equipped with a magnesium anode for additional corrosion resistance.
- Operating pressures up to 10 bar.
- Equipped safety valves, air release valves, and pressure relief valves for secure operation.
- Insulation- High-density polyurethane foam
- Backup Heating- Provision for installing an electric heating element for auxiliary heating.
- Suitable for 1 or 2 heat exchangers to enhance heat transfer efficiency
- Available in various sizes, typically ranging from 500 liters to 5,000 liters or more.

Stainless Steel Hot Water Storage Tank

For Commercial Solar Water Heaters



This premium storage tank features a food-grade SUS316 stainless steel inner tank, providing exceptional corrosion resistance, paired with a robust SUS304 stainless steel outer tank for enhanced durability.

- Inner Tank: Food-grade SUS316 stainless steel
- Outer Tank Material: SUS304 stainless steel.
- Insulation: High-density polyurethane (PU) foam, 50–100 mm thick.
- Operating Pressure: Up to 10 bar.
- Includes safety valves, pressure relief valves, and air release valves for secure operation.
- Available with options for 1 or 2 integrated heat exchangers.
- Provision for an electric heating element for auxiliary heating.
- Magnesium anode for enhanced corrosion resistance.
- Capacity: Available in various sizes, typically ranging from 500 liters to 5,000 liters.

This stainless-steel storage tank is the ideal choice for solar water heating systems for commercial and industrial applications.

Parts & Accessories

We provide a comprehensive range of spare parts and accessories for all types of solar water heaters and offer complete maintenance services.

Backup Heating Element | Thermostat | Solar Station | Solar Controller | Pressure Relief Valve
 Pressure and Temperature Valve | Thermo Mixing Valve | Expansion Tank | Magnesium Anode | Air Vent
 Circulation Pump | Flow Meter | Compression Fittings | Emergency Cooler | Solar Thermal Medium



Support Frames





Disclaimer: The images and dimensions provided in this catalogue are for indicative purposes only. Please refer to the product datasheet for accurate specifications and details before placing an order. If you require any additional information regarding our products and their applications, please don't hesitate to contact us.

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